



Combined neighborhood tabu search for community detection in complex networks

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| Mots-clés | clustering [3], combinatorial optimization [4], community detection [5], graph partitioning [6], Heuristics [7], tabu search [8] |
| Résumé en anglais | Community is one prominent feature of complex networks. Community detection is one important research topic in the area of complex networks analysis. In this paper, we introduce a new heuristic algorithm for community detection using the popular modularity measure. The proposed algorithm, called CNTS for combined neighborhood tabu search (CNTS), relies on a joint use of vertex move and merge operators to improve the quality of visited solutions. A dedicated tabu mechanism provides the algorithm with additional capacities to effectively explore the search space. Experiments using a collection of 21 well-known benchmark instances show that the proposed algorithm competes favorably with state-of-the-art algorithms. |
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Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=7570>
- [2] <http://okina.univ-angers.fr/jinkao.hao/publications>
- [3] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8773>
- [4] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8860>

- [5] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8930>
- [6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8649>
- [7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=3676>
- [8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8662>
- [9] <http://okina.univ-angers.fr/publications/ua15243>
- [10] <http://dx.doi.org/10.1051/ro/2015046>
- [11] <http://www.rairo-ro.org/articles/ro/abs/2016/02/ro150046-s/ro150046-s.html>

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